

AMENDMENT TO THE SPECIFICATION:

Please amend paragraphs [0001] and [0002] as follows:

~~STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH~~

~~[0001] This invention was made with Government support under Contract No. DE-AC05-00OR22725 awarded to UT-Battelle, LLC, by the U.S. Department of Energy. The Government has certain rights in this invention.~~

~~CROSS-REFERENCE TO RELATED APPLICATION~~

~~[0002] The benefit of priority based on U.S. Provisional Patent Application No. 60/472,544, filed May 22, 2003, is claimed herein.~~

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[0001] The benefit of priority based on U.S. Provisional Patent Application No. 60/472,544, filed May 22, 2003, is claimed herein.

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[0031] Fig. 2 shows a side view of an end excitation, radial gap, high strength undiffused machine 30. The overall shape is similar to a conventional induction machine. The stator laminated core 31a and windings 31b are identical to those of a conventional AC machine. The rotor 32 of this end excitation, radial gap, machine 30 is preferably made of solid steel with the option of having shallow surface slits 32s along the axial direction for reducing the surface slot harmonics losses. In other embodiments, the core portions 31a, 32a of the stator 31 and the rotor 32 can be made of iron, one of many suitable steels or another iron alloy. The stator and rotor 31, 32 are separated by a radial air

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are separated by a radial air gap 34, which is a radial distance from an axis of rotation 33a for the rotor 32. When phase currents energize the polyphase windings 31b, they produce a rotating magnetic flux wave in the main air gap 34.